

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of estimating a product life, comprising:

~~determining performing~~ accelerated stress testing data ~~for on~~ a product to a point of product failure to collect accelerated stress testing data, the accelerated stress testing data representing the response of the product operating in a first environment;

calculating the mean-time-between-failures for the product operating in a second environment based on the accelerated stress testing data.

2. (Original) The method of claim 1, wherein:

said first environment being more likely than the second environment to cause the product to fail.

3. (Original) The method of claim 1, wherein:

the accelerated stress testing data represents the length of time the product operates in the first environment before the product fails.

4. (Original) The method of claim 1, wherein:

the accelerated stress testing data is derived from a plurality of different stress tests.

5. (Original) The method of claim 4, wherein:

the plurality of different stress tests includes a temperature test and a vibrational test.

6. (Original) The method of claim 1, wherein:

said accelerated stress testing data is derived from either linear, quadratic or exponential acceleration stress testing.

7. (Original) The method of claim 1, further comprising:
calculating upper and lower confidence limits for the MTBF calculation.
8. (Original) The method of claim 1, wherein:
said accelerated stress testing data includes bill of materials (BOM) information on the product.
9. (Original) The method of claim 1, wherein:
said step of calculating is performed during the design of the product.
10. (Original) The method of claim 1, wherein:
said step of calculating is performed prior to manufacturing the product for commercial use.
11. (Original) The method of claim 1, wherein:
said step of calculating is performed using a computer program.
12. (Original) The method of claim 1, wherein:
the accelerated stress testing data includes accelerated stress testing data for a previous design of the product.
13. (Original) The method of claim 12, wherein:
the accelerated stress testing data for the previous design of the product is derived from stress testing in an environment less likely to cause failure than said first environment.
14. (Original) The method of claim 12, further comprising:
calculating a change in MTBF from the previous design of the product.
15. (Original) The method of claim 12, wherein:

said step of calculating includes using the relationship $\text{EXP} [1/k \sum_{i=1}^k \ln(t_2 / t_1)]$; and wherein t_1 = time to first failure during accelerated stress testing for previous design of the product, and t_2 = time to first failure during accelerated stress testing for the product.

16. (Original) The method of claim 12, further comprising:
calculating a factor increase or decrease in the life of the product as compared to the life of the previous design of the product.

17. (Original) The method of claim 12, wherein:
the accelerated stress testing data is derived from a plurality of different stress tests.

18. (Original) The method of claim 17, wherein:
the different stress tests include a temperature test and a vibrational test.

19. (Original) The method of claim 12, wherein:
said step of calculating is performed during the design of the product.

20. (Original) The method of claim 12, wherein:
said step of calculating is performed prior to manufacturing the product for commercial use.

21. (Original) The method of claim 12, wherein:
said step of calculating is performed using a computer program.

22. (New) A method of estimating a product life, comprising:
performing accelerated stress testing on a product to collect accelerated stress testing data for the product;

based on the accelerated stress testing data, calculating a mean-time-between-failures for the product;
re-designing the product;
performing accelerated stress testing on the re-designed product to collect re-design accelerated stress testing data for the re-designed product;
based on the re-design accelerated stress testing data, calculating a mean-time-between-failures for the re-designed product; and
based on the mean-time-between-failures for the product and the mean-time-between-failures for the re-designed product, calculating a proportion change in product life resulting from the re-design.

23. (New) The method of claim 22, wherein the accelerated stress testing includes at least one of a vibrational test, a temperature test, a voltage margining test, a frequency margining test, an electrostatic discharge test, and a humidity test.